

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-15 are pending in this application. Claims 1-13 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent 6,157,478 to Naiki et al. (herein “Naiki”) in view of U.S. patent 6,061,190 to Kane et al. (herein “Kane”). Claims 14 and 15 were rejected under 35 U.S.C. §103(a) as unpatentable over Naiki in view of Kane and further in view of U.S. patent 5,2320,449 to Kuroda.

Addressing the rejection of Claims 1-13 under 35 U.S.C. §103(a) as unpatentable over Naiki in view of Kane, and the further rejection of Claims 14 and 15 further in view of Kuroda, those rejections are traversed by the present response.

Initially, applicants note independent claims 1, 12, and 14 are amended by the present response to clarify features recited therein. Specifically, independent claim 1 now additionally recites that the selection of one of the plural fixing and holding locations to where the light-source part is fixed “is made based on whether a glass cover is inserted between the coupling lens and the light deflector”. The other independent claims 12, and 14 are similarly amended as in independent claim 1 noted above.

The above-noted features clarify an embodiment of the present invention in which a light source and a coupling lens can be properly positioned based on whether a glass cover is inserted between a coupling lens and a light deflector.

More particularly, as shown for example in Figure 2 in the present specification a glass cover member 14 can be provided to soundproof or dustproof a light deflector 5. In that instance a light path from a light source to the light deflector 5 changes and shifts. The present inventors recognized it would be beneficial to change a positioning of the light source and its coupling lens to compensate for the change in light shift from that glass cover 14.

The claimed invention achieves that objective and operation by providing plural locations at which the light source and coupling lens can be positioned based on whether the glass cover is provided. Such subject matter is also fully discussed in the present specification for example at page 23, line 5 et seq. The above-noted features are also believed to clearly distinguish over the applied art.

In contrast to the above-noted claimed features, Naiki merely discloses a configuration in which a semiconductor 1 is moved together with a holding member 5, or a lens barrel 20 is moved, along a V-shaped groove 7a or 10a along the optical-axis direction, as shown in Figures 8, 10, and 11, for focus adjustment. However, Naiki does not teach or suggest any feature in which a selection of a position of a light source and its coupling lens is made based on whether a glass cover is inserted between the coupling lens and the light deflector. Thus, Naiki clearly does teach or suggest the features now recited in each of amended independent claims 1, 12, and 14, and the claims dependent therefrom.

Also, with respect to independent claims 8, 13, and 15, those claims recite a feature of “a mounting position of said second imaging optical system is changeable according to whether or not said transparent member is provided”. According to such a feature, a position of a second image optical system receiving light output from a detector can also be changeable according to whether or not a transparent member is provided, see for example the embodiments noted in Figures 12, 13, and 14 in the present specification in which a position of the imaging optical system 104 is changeable. Such further features are believed to clearly distinguish over the applied art.

With respect to the above-noted feature in claims 8, 13, and 15 the outstanding Office Action recognizes that Naiki does not teach such a feature, and to overcome that deficiency in Naiki the outstanding Office Action states:

It would have been obvious to one of ordinary skill in the art at the time of the invention to change the mounting position of the second imaging optical system along the main scanning direction and along the optical axis direction to adjust the position of the beam of Naiki et al for when the transparent cover is mounted and for when it is not mounted in order to maintain the beam position on the medium to be scanned.¹

In response to the above-noted basis for the outstanding rejection, applicants note Naiki clearly does not teach or suggest such a feature, and the outstanding Office Action is clearly making a hindsight assumption that such a feature would have been suggested to one of ordinary skill in the art. Such a hindsight assumption must be based on a teaching in the reference to be proper, and as the above-noted basis for the rejection is not based on a teaching in any prior art reference it is clearly improper. The above-noted basis for the outstanding rejection clearly has not set forth a proper *prima facie* case of obviousness as required under M.P.E.P. §2143, which is further discussed below.

Applicants also reiterate previous comments presented to the allowability of the claims over the applied art and address the further comments noted in the Advisory Action of January 28, 2005, now below.

As also recognized in the outstanding Office Action:

Naiki et al does not teach the plurality of holding and fixing locations comprises pins and holes provided to the light source part and the optical housing, which pins and holes are combined with insertion of the pins to the holes to determine a relative spatial relationship between the light source part and the optical housing.²

To overcome that recognized deficiency in Naiki the outstanding rejection cites the teachings in Kane and specifically states:

Kane et al teaches the use of pins (references 30a and 30b) and holes (column 3 line 61) to hold and fix an optical element in a holding and fixing location by inserting the pins in the holes (column 3 lines 59-62). It would have been obvious to one of ordinary skill in the art at the

¹ Office Action of September 22, 2004, page 6, first full paragraph.

² Office Action of September 22, 2004, the sentence bridging pages 3-4.

time of the invention to use the pins and holes of Kane et al for the plurality of holding and fixing locations in the optical scanning device of Naiki et al in order to make the locating of the light source part relative to the optical housing faster and easier.³

In response to the above-noted basis for the outstanding rejection, applicants respectfully submit that the outstanding rejection (1) does not fully meet the claim limitations, and (2) would not have been suggested to one of ordinary skill in the art as it is contradictory to the teachings in the applied references to Naiki and Kane.

First, applicants note that Kane merely discloses a configuration for positioning to a single fixed location. In contrast to Kane the claims recite “a plurality of holding and fixing locations”. That is, in the claims one of a plurality of predetermined locations can be selected according to a predetermined requirement, and after that positioning is performed for the thus-selected location. The teachings of a single fixed location in Kane clearly do not meet such limitations, and thus even if the teachings in Kane were combined with those in Naiki the claimed invention would not be realized.

Naiki discloses a structure with V-shaped grooves 7a, 10a, see for example Figure 10, provided for adjustment along an optical axis. In Naiki the V-shaped grooves 7a, 10a are provided for freely moving a member therealong. In such a way, applicants submit that Naiki does not disclose or suggest a configuration for positioning at a different finite number of locations. In Naiki an adjustment work is needed for determining a certain one point from among infinite possible points existing along the optical axis in the V-shaped groove. In Naiki such a work requires a very high accuracy.

In contrast to Naiki, according to the claims as currently written a plurality of finite locations (for example two different locations), are previously defined, and a necessary work to be performed for the adjustment merely includes an operation of selecting one of such

³ Office Action of September 22, 2004, page 4, first full paragraph.

finite (for example two) locations. Such a work of selecting one of the predetermined finite locations does not require the same type of high accuracy as in Naiki.

In such ways, the claims are believed to differ fundamentally from the teachings in Naiki.

Moreover, applicants respectfully submit that the proposed combination of teachings is contrary to the teachings in the references themselves. That is, the teachings in Kane of providing the single fixed location set by pins is irrelevant and could not possibly be combined with the teachings in Naiki.

As noted above Naiki requires essentially sliding elements within a groove to determine a specific point from among infinite points in the groove. The teaching in Kane of utilizing one fixed point set by pins and holes has no relevance whatsoever to the device in Naiki.

Moreover, one of ordinary skill in the art could not possibly combine the teachings in Kane with those of Naiki. The basis for the outstanding rejection appears to suggest that the pins and holes of Kane could be provided for the plurality of holding and fixing locations in Naiki. However, such a modification is impossible because, as noted above, Naiki requires selecting one point from among infinite points. It is clearly impossible to provide an infinite number of pins and holes in the device of Naiki. Also, Kane does not provide any such teaching of providing plural pins and holes, but again is directed to providing a single fixed location.

As the device of Naiki requires selecting one point from among any point along a groove, the teachings of utilizing a single fixed location set by pins and holes in Kane is irrelevant to the teachings in Naiki and could not possibly be utilized with the teachings in Naiki.

Applicants respectfully submit that the basis for the outstanding rejection is a hindsight reconstruction based only on applicants' own disclosure. The applicants of the present invention recognized that benefits can be achieved by utilizing plural holding and fixing locations. That basic teaching is not taught or suggested by either Naiki or Kane.

Arguments as presented above were set forth in the Response filed June 29, 2004. In response to those arguments the outstanding Office Action has maintained the outstanding rejection and specifically states:

In the Applicant's response on June 29, 2004, the Applicant argues with respect to claims 1-15, that one would not be motivated to combine the holes and pins of Kane et al for plurality of holding and fixing locations of Naiki et al because the holes and pins of Kane represent a discrete location and the holding and fixing locations of Naiki could be infinite (pages 10 – 13). This argument has been fully considered and not found to be persuasive. The Examiner respectfully disagrees with the Applicant's argument. While a series of discrete locations would provide less adjustability than infinite locations of Naiki et al, one would be motivated to choose the reduced adjustability in order to make the adjustment faster and easier by eliminating free movement of the lens as indicated on page 4 (lines 3-4) of the office action dated March 29, 2004. Kane et al is relied on solely for the specific type of holding and fixing location of holes and pins, and not for the number of holding and fixing locations.⁴

The above-noted basis for maintaining the outstanding rejection is believed to be clearly improper and only supports applicants' position that the outstanding rejection is a hindsight reconstruction of applicants' claimed invention, and that the outstanding rejection does not set forth a proper *prima facie* case of obviousness.

M.P.E.P. § 2143 sets forth the basic requirements of a *prima facie* case of obviousness, and specifically states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or

⁴ Office Action of September 22, 2004, page 2, last paragraph (original emphasis).

in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The outstanding rejection has not set forth any of the three criteria noted above to set forth a proper *prima facie* case of obviousness, as now discussed in even further detail.

As noted above, to establish a proper *prima facie* case of obviousness first there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The outstanding rejection is based on combining the teachings in Naiki in view of Kane. The basis for the outstanding rejection is even more particularly directed to utilizing a system for a discrete location and holding and fixing locations of Kane to be applied to the system of Naiki. The Office Action now states that such a motivation exists "to make the adjustment faster and easier by eliminating free movement of the lens as indicated on page 4 (lines 3-4) of the office action dated March 29, 2004".

Applicants first note that basis for the outstanding rejection is simply not based on any teachings in the references themselves or on any knowledge generally available in the art. It is simply the case that the system of Kane does not even disclose or suggest making an adjustment faster and easier by eliminating free movement of the lens. In fact, if the system of Kane was applied into the system of Naiki no adjustments would be possible as there is only one fixed holding position disclosed in Kane. The above-noted motivation is nonsensical to the teachings in the cited art.

In Naiki a V-groove is applied for the purpose of providing an easily movable state for adjusting a position of an optical device placed on the V-groove. That is, Naiki discloses a system that already achieves the exact motivation, allowing a fast and easy adjustment, noted in the Office Action to modify Naiki. The motivation noted in the Office Action is in that way simply not even applicable to Kane. In fact, in contrast to the system of Naiki providing an easily movable state for adjusting a position of an optical device placed on the V-groove, Kane discloses at column 3, lines 30-61 a configuration of prongs 30a and 30b and openings to which the prongs 30a and 30b are fitted into for the purpose of providing a state in which a base is placed in a *fixed (non-adjustable)* position.

Thus, the system in Kane does not even allow a faster and easier adjustment by eliminating free movement of the lens. Kane teaches just the opposite, no adjustment. A faster and easier adjustment is achieved by the system in Naiki and not the system of Kane.

Further, the two systems in Naiki and Kane actually have completely opposite purposes and thus one of ordinary skill in the art could not have combined such teachings in the manner suggested in the Office Action. This results because, as mentioned above, utilizing the V-groove 7a or 10a according to Naiki provides a free adjustment condition, but employment of the prongs 30a and 30b and openings according to Kane in fact provides no adjustable condition.

Further, the statement noted above that such a modification of Naiki in view of Kane operates “by eliminating free movement of the lens” is in fact completely contrary to the device of Naiki. That is, the basis for the outstanding rejection suggests such a modification to Naiki that is actually contrary to the express purpose of the device of Naiki.

As noted above, Naiki discloses utilizing the V-groove operation therein to allow for an adjustment. The motivation known in the Office Action of “eliminating free movement of the lens” is directly contrary to the objective of the device of Naiki. Stated another way,

Naiki is directed to avoiding “eliminating free movement of the lens” since eliminating free movement of the lens causes difficulty in the adjustment work in Naiki.

Thus, the outstanding rejection is based on a modification to Naiki that is in fact contrary to the objective of the device of Naiki. Clearly such a modification could not have been suggested to one of ordinary skill in the art.

Another basis for the outstanding rejection noted above is “Kane is relied upon solely for the specific type of holding and fixing location of holes and pins, and not for the number of holding and fixing locations”.

That statement in the outstanding Office Action is not understood in any manner as it is now unclear on what basis the teachings in Kane are even being applied. Clearly Kane cannot be provided to disclose providing an infinite number of holes and pins to achieve the objective of the device of Naiki of providing adjustment. Kane itself only discloses the use of a single holding position, but evidently the Office Action is not relying upon Kane for such a teaching. It is thus completely unclear on what position the Office Action even relies upon Kane.

Stated another way, applicants respectfully request that it be clearly explained what are the results of a combination of teachings in Naiki and Kane. Specifically, how many fixed holding and fixing locations of holes and pins would result from such a combination. Kane discloses utilizing only one such fixed location, but evidently that is not the basis for the rejection. Naiki, in contrast to Kane, provides for an infinite number of adjusting positions, but clearly it is not physically or mathematically possible for Kane to provide an infinite number of holes and pins for an infinite number of holding and fixing locations. Thus, it is completely unclear from the Office Action how the combination of teachings are even being combined.

The second basic requirement for a proper *prima facie* case of obviousness noted above is that there must be a reasonable expectation of success with the combination of teachings. It is clearly the case that there could be no reasonable expectation of success by combining Naiki in Kane for the reasons discussed above, namely that such a modification would deprive Naiki of one of its objectives of allowing adjustments.

The final requirement for a proper *prima facie* case of obviousness is that the prior art reference or references when combined must teach or suggest all the claim limitations, and that both the teaching or suggestion to make the claimed combination and the reasonable expectation of success are to be found in the prior art, not in applicant's disclosure.

It is clearly the case that combining the teachings of Naiki and Kane is not based on any suggestion in the references themselves.

The motivation noted above "to make the adjustment faster and easier by eliminating free movement of the lens as indicated on page 4 (lines 3-4) of the Office Action dated March 29, 2004", is not based on any teachings in the applied references themselves. Applicants respectfully request that it be clearly pointed out where either of the references to Naiki or Kane disclose such a motivation. Even more particularly, where does Kane disclose or suggest that the system therein utilizing one set of fixed pins and receptacles would allow faster and easier adjustment by eliminating free movement of a lens. The outstanding rejection is puzzling as to where such a motivation is derived, but it appears to be clearly the case that such a motivation is not derived from the references themselves.

In view of these further comments, applicants respectfully submit that clearly the outstanding rejection does not establish a proper *prima facie* case of obviousness and that one of ordinary skill in the art would not have combined the teachings of Naiki and Kane in the manner suggested in the Office Action.

For the foregoing reasons, applicants respectfully submit no combination of teachings of Naiki and Kane renders obvious the claimed subject matter.

In response to the above-noted comments the Advisory Action of January 28, 2005 states:

...at least while a series of discrete locations would provide less adjustability than infinite locations of Naiki et al, one would be motivated to choose the reduced adjustability in order to make the adjustment faster and easier by eliminating free movement of the lens. Therefore, the rejection is deemed proper.

The above-noted basis for maintaining the rejection is not at all understood. First, applicants respectfully request that it be pointed out where such motivation exists in the cited art. That is, where does the art provide any teaching of utilizing only finite adjustable locations in Naiki for the benefit of faster and easier adjustment. Also, it is completely unclear as to where the basis for the outstanding rejection indicates that such would even be desirable in the device of Naiki. Stated another way, how could the device of Naiki properly operate with only a few discrete adjustable locations. Applicants provided detailed comments above as to how Naiki operates, and there has been no rebuttal to the above-noted positions. Therefore, it is unclear how the Office Action can then take the position that Naiki can properly operate with only a few discrete locations.

Applicants also request it be clearly indicated on the record as to what the Examiner is proposing as a modification to Naiki. That is, applicants respectfully request it be clearly stated on the record as to how many different adjustable finite locations would have been suggested in Naiki in the basis for the outstanding rejection. It is unclear how the Office Action is specifically interpreting the modifications of Nakai.

In any event, for the reasons noted above it is believed clear that Nakai could not properly operate in its desired manner if only a few discrete positionable locations in Nakai were utilized. Also, it is clear that the above-noted basis for the outstanding rejection of

providing easier and faster adjustment in Nakai by only utilizing a few discrete positionable locations is not provided in any reference cited but is only the Examiner's hindsight speculation as to a potential modification to Nakai, based only on the teachings in the present application. Such a hindsight speculation is clearly improper.

In view of these foregoing comments, applicants respectfully submit the claims clearly distinguish over Nakai in view of Kane.

Moreover, no teachings in Kuroda are believed to overcome the above-noted deficiencies of Nakai in view of Kane.

In view of these foregoing comments, applicants respectfully submit the claims as currently written distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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